



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,137	08/28/2000	Katsumi Hirai	04329 2365	8118
7590	11/08/2004		EXAMINER	
Finnegan Henderson Farabow 1300 I Street N W Washington, DC 20005-3315			FERRIS, DERRICK W	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/623,137	HIRAI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Derrick W. Ferris	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 August 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1-3 and 7-9 is/are allowed.  
 6) Claim(s) 4-6 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 13 September 2000 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Response to Amendment***

1. **Claims 1-9** as amended are still in consideration for this application. Applicant has canceled no claims. Applicant has added claims **7-9**.
2. Examiner **withdraws** the 112-second paragraph rejection based on applicant's claim amendment.
3. Examiner **withdraws** the anticipated rejection to **Rich** for Office action filed **03/10/04**. See 112-first paragraph rejection and new rejection below.
4. Examiner notes the 102(e) date for applicant's continuation is August 28, 2000 and thus applicant is not entitled to a priority date of December 28, 1998 in reference to applicant's remarks on page 7, second full paragraph. See Notice of Acceptance of Application Under 35 U.S.C. 371 mailed 9/13/2000.
5. No PTO form 1449 was found for IDS filed 7/8/2002. However, the two references applicant refers to have been added to PTO form 892 such that the references are now considered. These two references and corresponding search report were found in the application.
6. Examiner **withdraws** the obviousness rejection to **Rich** in view of **Kim** for Office action filed **03/10/04**. Examiner agrees with applicant that the newly amended claim limitation switching the second antenna *to the first*, originally-selected antenna, to perform handoff processing is not taught by the cited references.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

Art Unit: 2663

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. **Claims 4-6** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the issue is the newly added limitation “then delaying the first intermediate frequency signal *by at least a reciprocal of a chip rate* in the CDMA system”. Specifically at issue is the determined value of the delay. First, applicant did not provide support for applicant’s amendment in Applicant’s Remarks. As to the specification, examiner notes claim 4 is directed to applicant’s second embodiment taught, *inter alia*, at pages page 18, line 9 – page 27. For example, see applicant’s figure 5 where the issue is the value set for the delay circuit 23. Absent from page 20, lines 6-14 is the specific setting for time t of delay circuit 23. Further evidence is also found at the bottom of page 25 which does not specify a value for delay circuit 23. Examiner notes that applicant mentions that the delay time of multipath received by each of the antennas 10 and 18 is smaller than the chip rate, see e.g., bottom of page 25. The only support the examiner could find is in reference to applicant’s *Background* on page 5, lines 1-15. Specifically, applicant teaches that the prior art search 16a is a *reciprocal of a chip rate* in the prior art CDMA system and that if a delay time of the multipath is smaller than the reciprocal, the multipath components are separated in the fingers 16b, 16c, and 16d such that the *symbols* cannot be *synthesized*. However, no logic is drawn from the above statement to the specific setting of delay circuit 23 in applicant’s figure 5. In particular, examiner notes the above statement references the rake receiver and specifically *symbol synthesizer 16e* which is separate

Art Unit: 2663

and distinct from *delay circuit 23* which interfaces with *synthesizer 24*. In addition, the further limitation of *by at least a reciprocal* was not found. No support was further found in applicant's specification including applicant's drawings. Applicant is requested to provide page and line numbers of where the above limitation at issue is found in applicant's specification. Applicant is further reminded that no new subject matter may be added to applicant's specification. Claims 5 and 6 stand rejected for depending on a rejected base claim.

For the purpose of the rejection(s) below the examiner assumes the limitation would have been obvious to one skilled in the art since only support the examiner found was mentioned in applicant's background.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 4-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,229,840 B1 to *Ichihara* in further view of U.S. Patent No. 5,940,452 to *Rich*.

As to **claim 4**, see figure 1 (or figure 5) of *Ichihara*. A first antenna is shown as 101. A second antenna is shown as 102. A reception means is shown as part of combiner 106. In particular, a first intermediate-frequency signal (a) is delayed using delay T 105, see e.g., column 2, lines 56-67 and column 3, lines 23-26.

Not shown in figure 1 is the further recitation that a first antenna is also capable of transmitting. In particular, figure 1 only shows a reception circuit.

*Rich* teaches the above limitation e.g., in figure 1 where antenna 114 is 116 is capable of both transmission and reception.

Thus examiner proposes to modify *Ichihara* to further include transmission.

Examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include a transmission section for only one antenna. In particular, one skilled in the art would have been motivated to modify the above reference for the purpose of having the mobile system transmit as well as receive. As such, *Rich* discloses the above motivation found e.g., in figure 1 since the base station 104 receives a transmitted signal 162 from antenna 116. Examiner furthermore notes that *Rich* also teaches combining signals in a third state.

As to claims 5-6, signal evaluation means is taught as part of figure 6 in *Rich* since the stronger signal is selected.

***Allowable Subject Matter***

11. **Claims 1-3 and 7-9** are allowable.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2663

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris  
Examiner  
Art Unit 2663

  
DWF

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2000

(07/29/18)